

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference  <b>P100933WO</b>	<b>FOR FURTHER ACTION</b>		see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No.  <b>PCT/GB 03/04388</b>	International filing date (day/month/year)  <b>10/10/2003</b>	(Earliest) Priority Date (day/month/year)  <b>14/10/2002</b>	
Applicant  <b>ML LABORATORIES PLC</b>			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

### 4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

### 5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

1

☐ None of the figures.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/04388

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N9/02 C07K14/47 C07K14/195

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal, MEDLINE, WPI Data, PAJ, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>RAHMAN Q K ET AL: "Breaking the non-responsiveness of C57BL/6 mice to the malarial antigen EB200: The role of carrier and adjuvant molecules."</p> <p>SCANDINAVIAN JOURNAL OF IMMUNOLOGY, vol. 58, no. 4, October 2003 (2003-10), pages 395-403, XP002272656</p> <p>ISSN: 0300-9475 (ISSN print)</p> <p>abstract</p> <p>page 396, column 1, paragraph 3</p> <p>page 399, column 1, paragraph 1 -column 2, paragraph 1; table 2</p> <p>page 401, column 1, paragraph 2 -page 402</p> <p>----</p> <p>-/--</p>	<p>1,2,</p> <p>8-12,</p> <p>19-23,</p> <p>34-43</p>

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

9 March 2004

Date of mailing of the international search report

29/03/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Mossier, B

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/04388

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE BIOSIS 'Online!  BIOSCIENCES INFORMATION SERVICE,  PHILADELPHIA, PA, US;  SHENGWU HUAXUE YU SHENGWU WULI XUEBAO,  May 2001 (2001-05)  LI MING_FENG ET AL: "A candidate oral  vaccine to Helicobacter pylori: Fusion  protein of HspA and CtxB"  Database accession no. prev200100290633  XP002272812  abstract</p> <p>---</p>	1-4,11, 12, 19-21, 34-43
X	<p>WO 96 05866 A (BLANKENSTEIN THOMAS ;MAX  DELBRUECK CENTRUM (DE); CAYEUX PEZZUTTO S)  29 February 1996 (1996-02-29)  abstract</p>	1-4,11, 12,34-43
Y	<p>page 3, paragraph 2 -page 5, paragraph 1</p> <p>---</p>	5-7, 13-18, 24-26
X	<p>WO 01 64739 A (COBRA THERAPEUTICS LTD)  7 September 2001 (2001-09-07)  abstract</p>	12-15,49
Y	<p>page 4, line 4 - line 32  page 11, line 20 -page 12, line 29; claims  1-3</p> <p>---</p>	5-7, 13-18, 24-26
X	<p>WO 01 35810 A (DANA FARBER CANCER INST INC  ;SHERR DAVID (US); UNIV BOSTON (US); M)  25 May 2001 (2001-05-25)  abstract  page 9, line 14 -page 10, line 29  page 17, line 11 - line 15</p> <p>---</p>	12,14, 17,35-40
X	<p>US 5 830 464 A (SRIVASTAVA PRAMOD K)  3 November 1998 (1998-11-03)  abstract</p> <p>---</p>	48
Y		9,22
X	<p>DJEHA A H ET AL: "EXPRESSION OF  ESCHERICHIA COLI B NITROREDUCTASE IN  ESTABLISHED HUMAN TUMOR XENOGRAPTS IN MICE  RESULTS IN POTENT ANTITUMORAL AND  BYSTANDER EFFECTS UPON SYSTEMIC  ADMINISTRATION OF THE PRODRUG CB1954"  CANCER GENE THERAPY, NORWALK, CT, US,  vol. 7, no. 5, May 2000 (2000-05), pages  721-731, XP001015218  ISSN: 0929-1903  cited in the application</p>	49
A	<p>the whole document</p> <p>---</p> <p>-/--</p>	1-48

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/04388

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	BLACHERE N E ET AL: "HEAT SHOCK PROTEIN VACCINES AGAINST CANCER" JOURNAL OF IMMUNOTHERAPY, RAVEN PRESS, NEW YORK, NY, US, vol. 14, no. 4, 1993, pages 352-356, XP000973693 ISSN: 1053-8550 abstract	9,22
A	WO 98 17799 A (WANG BIN ;UNIV PENNSYLVANIA (US); APOLLON INC (US); BOYER JEAN D ( ) 30 April 1998 (1998-04-30) abstract page 14, line 1 -page 15, line 21 page 27, line 3 -page 28, line 21; claims 1,2,5-36	
A	US 5 182 109 A (AIZAWA CHIKARA ET AL) 26 January 1993 (1993-01-26)	
A	XU G ET AL: "Strategies for enzyme/prodrug cancer therapy." CLINICAL CANCER RESEARCH: AN OFFICIAL JOURNAL OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH. UNITED STATES NOV 2001, vol. 7, no. 11, November 2001 (2001-11), pages 3314-3324, XP002272658 ISSN: 1078-0432	
A	GROVE J I ET AL: "VIRUS-DIRECTED ENZYME PRODRUG THERAPY USING CB1954" ANTI-CANCER DRUG DESIGN, BASINGSTOKE, GB, vol. 14, no. 6, December 1999 (1999-12), pages 461-472, XP009003925 ISSN: 0266-9536	
A	SRIVASTAVA P K ET AL: "HEAT SHOCK PROTEIN-PEPTIDE COMPLEXES IN CANCER IMMUNOTHERAPY" CURRENT OPINION IN IMMUNOLOGY, CURRENT BIOLOGY LTD. LONDON, GB, vol. 6, no. 5, 1994, pages 728-732, XP002037578 ISSN: 0952-7915	

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB 03/04388

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 41 - 49 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 03/04388

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9605866	A	29-02-1996	DE 4431401 A1	29-02-1996
			AT 228016 T	15-12-2002
			AU 688101 B2	05-03-1998
			AU 3253195 A	14-03-1996
			BR 9508765 A	11-11-1997
			CA 2198234 A1	29-02-1996
			WO 9605866 A2	29-02-1996
			DE 19580890 D2	19-06-1997
			DE 59510466 D1	02-01-2003
			DK 777499 T3	17-03-2003
			EP 0777499 A1	11-06-1997
			ES 2187568 T3	16-06-2003
			JP 2975117 B2	10-11-1999
			JP 10505339 T	26-05-1998
			PT 777499 T	31-03-2003
			US 6039941 A	21-03-2000
WO 0164739	A	07-09-2001	AU 3755101 A	12-09-2001
			CA 2401533 A1	07-09-2001
			CN 1418224 T	14-05-2003
			EP 1268536 A1	02-01-2003
			WO 0164739 A1	07-09-2001
			JP 2004500097 T	08-01-2004
			US 2002165173 A1	07-11-2002
WO 0135810	A	25-05-2001	CA 2390882 A1	25-05-2001
			EP 1241945 A2	25-09-2002
			WO 0135810 A2	25-05-2001
US 5830464	A	03-11-1998	AU 742986 B2	17-01-2002
			AU 6056498 A	26-08-1998
			CA 2280945 A1	13-08-1998
			EP 1001807 A1	24-05-2000
			JP 2001511183 T	07-08-2001
			WO 9834642 A1	13-08-1998
			US 6322790 B1	27-11-2001
WO 9817799	A	30-04-1998	AU 729579 B2	01-02-2001
			AU 5002297 A	15-05-1998
			BR 9712852 A	16-11-1999
			CA 2269074 A1	30-04-1998
			EP 0958364 A1	24-11-1999
			JP 2001507216 T	05-06-2001
			KR 2000052710 A	25-08-2000
			WO 9817799 A1	30-04-1998
US 5182109	A	26-01-1993	JP 2243633 A	27-09-1990
			JP 2849632 B2	20-01-1999
			CA 1335571 C	16-05-1995
			DE 3911442 A1	02-11-1989
			FR 2629717 A1	13-10-1989
			GB 2217600 A , B	01-11-1989
			KR 9603378 B1	09-03-1996